



Launch Mission Execution Forecast

Mission: Falcon 9 Inspiration-4

Issued: 12 Sep 2021 / 0930L (1330Z)

Valid: 15 Sep 2021 / 2000 – 16/0800L (16/0000 – 1200Z)



Forecast Discussion: The Bermuda Ridge axis is well to the north of Central Florida, which allows the east coast sea breeze to move inland rapidly, keeping most afternoon/evening convection on the western half of the peninsula. This pattern also allows tropical waves travelling along the southern periphery of the ridge to move over the Space Coast. These waves will bring added cloud cover and shower activity and could further develop into tropical cyclones. There is a moderate chance one of these stronger waves will develop a circulation center on the next few days, which could bring added moisture and shower activity to the Spaceport and eventually into the ascent corridor. The primary launch weather concerns are the Thick Cloud Layer Rule, Flight Through Precipitation.

On Thursday, the system will likely be north of the area, delivering some decrease in cloud cover and shower activity across the Spaceport. However, the guidance is not consistent on the strength or location of the tropical feature, so the primary launch weather concerns remain the Thick Cloud Layer Rule, Flight Through Precipitation.

Launch Day	Probability of Violating Weather Constraints							
	30%	Primary Concerns: Thick Cloud Layer Rule, Flight Through Precipitation						
	Weather Conditions						Additional Risk Criteria	
	Weather/Visibility:	Isold Showers / 7 mi.	Type	Coverage	Base (ft)	Tops (ft)	Onshore Winds:	Moderate
	Temp/Humidity:	78°F / 90%	Cumulus	Few	3,000	10,000	Booster Recovery Weather:	Moderate
	Liftoff Winds (200'):	120° 8 - 12 mph	Altocumulus	Scattered	12,000	15,000	Solar Activity:	Low
24-Hour Delay	Probability of Violating Weather Constraints							
	20%	Primary Concerns: Thick Cloud Layer Rule, Flight Through Precipitation						
	Weather Conditions						Additional Risk Criteria	
	Weather/Visibility:	Isold Showers / 7 mi.	Type	Coverage	Base (ft)	Tops (ft)	Onshore Winds:	Moderate
	Temp/Humidity:	78°F / 90%	Cumulus	Few	3,000	10,000	Booster Recovery Weather:	Moderate
	Liftoff Winds (200'):	150° 5 - 10 mph	Altocumulus	Scattered	12,000	15,000	Solar Activity:	Low
<i>Note: The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity.</i>								
Next Forecast Will Be Issued		13 Sep 2021						